

## Amid Concerns of Safety, EPA Raised Allowable Levels for Glyphosate in Food

All of this points to the importance of testing for and restricting glyphosate residues in food, yet that is NOT being done, ostensibly due to cost. It also brings up another important point, which is that despite rapidly rising concerns about safety, in 2013 the EPA quietly went ahead and *raised* the allowable levels of glyphosate in food—and by significant amounts<sup>19, 20</sup> to boot. Allowable levels in oilseed crops such as soy were doubled, from 20 ppm to 40 ppm. So all of a sudden, that makes “extreme levels” appear to be on the lower end of the allowable spectrum!

It also raised the levels of permissible glyphosate contamination in other foods—many of which were raised to 15-25 times previous levels! Farmers are also ramping up their usage of the chemical due to the proliferation of [glyphosate-resistant weeds](#). It's worth noting that, for years, pro-GMO advocates claimed that genetic engineering would lead to reduced reliance on toxic agricultural chemicals. Now, the data shows us the exact converse has happened.

## Lies, Lies, and More Lies

We were promised that GMOs would result in LESS pesticide use, but as noted in a 2012 article by Tom Philpott,<sup>21</sup> Monsanto's Roundup Ready technology “has called forth a veritable monsoon of herbicides, both in terms of higher application rates for Roundup, and... growing use of other, more-toxic herbicides.” Philpott's article includes eye-opening statistics compiled by Chuck Benbrook, a research professor at Washington State University's Center for Sustaining Agriculture and Natural Resources. Benbrook discovered that:

- Overall, GE technology drove up herbicide use by 527 million pounds (about 11 percent) between 1996 (when Roundup Ready crops were initially released) and 2011
- Herbicide use dropped by about two percent between 1996 and 1999, but shortly thereafter, as weeds began developing resistance against the chemical, application rates skyrocketed

- In 2002, glyphosate use on Roundup Ready soybeans rose by 21 percent. Overall, American farmers increased their use of glyphosate by 19 million pounds that year
- By 2011, farmers growing Roundup Ready crops (corn, soy, and cotton) used 24 percent more Roundup than farmers planting non-GE versions of the same crop, because by that time, glyphosate-resistance had become the norm. Farmers also began resorting to older, more toxic herbicides like [2,4-D](#)

## **‘Inert’ Ingredients in Pesticides May Also Be Profoundly Toxic**

A third issue that is completely ignored by the USDA when they claim pesticide residues in food are within safe levels is the fact that “inert” ingredients in herbicidal formulations are not necessarily inactive. On the contrary, synergistic effects between active and so-called inactive ingredients are a hidden source of toxicity that is widely overlooked.

As discussed in a 2006 paper published in the *Journal of Environmental Health Perspectives*,<sup>22</sup> it’s important to realize that the term “inert ingredient” does NOT mean that it is biologically or toxicologically harmless. When you see “inert” or “inactive ingredients” listed on the label of a pesticide or herbicide, it only means that those ingredients will *not harm pests or weeds*. This is how federal law classifies “inert” pesticide ingredients.<sup>23</sup> And while a chemical may not kill a pest or weed, it may have a profound impact on human biology.

For example, one 2012 study<sup>24</sup> revealed that inert ingredients like ethoxylated adjuvants in glyphosate-based herbicides are “active principles of human cell toxicity.” (On a side note, an “ethoxylated” compound is a chemical that has been produced using the carcinogen ethylene oxide.<sup>25</sup> The ethoxylation process also produces the carcinogenic byproduct [1,4-dioxane](#).) The study found that liver, embryonic, and placental cell lines exposed to various herbicide formulations for 24 hours at doses as low as 1 part per million (ppm), had adverse effects.<sup>26</sup> According to the authors:<sup>27</sup>

*“Here we demonstrate that all formulations are more toxic than glyphosate, and we separated experimentally three groups of formulations differentially toxic according to their concentrations in ethoxylated adjuvants.*

*Among them, POE-15 clearly appears to be the most toxic principle against human cells... **It begins to be active with negative dose-dependent effects on cellular respiration and membrane integrity between 1 and 3ppm, at environmental/occupational doses.** We demonstrate in addition that POE-15 induces necrosis when its first micellization process occurs, by contrast to glyphosate which is known to promote endocrine disrupting effects after entering cells.*

***Altogether, these results challenge the establishment of guidance values such as the acceptable daily intake of glyphosate, when these are mostly based on a long term in vivo test of glyphosate alone.** Since pesticides are always used with adjuvants that could change their toxicity, the necessity to assess their whole formulations as mixtures becomes obvious. **This challenges the concept of active principle of pesticides for non-target species.**"* [Emphasis mine]

Perhaps most disturbing of all, the researchers claim that cell damage and even cell death can occur at the residual levels found on Roundup-treated crops, as well as lawns and gardens where Roundup is applied for weed control. They also suspect that<sup>28</sup> Roundup might interfere with hormone production, possibly leading to abnormal fetal development, low birth weights, or miscarriages.

## **FDA Tests Less Than One-Tenth of One Percent of All Imported Fruits and Vegetables**

The monitoring of pesticide residue by the FDA and USDA received harsh criticism in a recent report created by the General Accounting Office (GAO). In its report,<sup>29</sup> titled: "Food Safety—FDA and USDA Should Strengthen Pesticide Residue Monitoring Programs and Further Disclose Limitations," the GAO suggests a number of major changes to the two agencies' pesticide monitoring programs. Greater sample sizes are needed, the report says, and special attention should be paid to pesticides that already have established EPA tolerance levels, rather than those that do not. The GAO also calls for greater transparency in annual test reports.